

ORP in mV	+700	+650	+600	+550	+500	+450	+400	+350	+300	+250	+200	+150	+100	+50	-50	-100	-150	-200	-250	-300	-350	-400	-450	ORP in mV
	Aerobic microbial metabolism (O ₂ electron acceptor)							Facultative microbial metabolism (NO ₃ ⁻ , Mn ⁴⁺ , Fe ³⁺ , SO ₄ ²⁻ electron acceptors)							Anaerobic microbial metabolism (SO ₄ ²⁻ , CO ₂ electron acceptors)									
					Oxidation of EPS, microaerophilic and aerobic biofilm elimination (>+300 mV)			Organic Carbon Oxidation COD/cBOD degradation with molecular oxygen (+50 mV to +300 mV)				Elimination of anaerobic biofilm (-50 mV to +50 mV)												
			Oxidation of Mn to Mn > +500 mV	Manganese Reduction (+220 mV to +500 mV)				Oxidation of Iron & Manganese. Maximum iron removal 3 mg/L							Acid formation, fermentation (-100 mV to -225 mV)									
			Reduction of nitrate (+300 mV to +600 mV)					Biological phosphorus removal/ Polyphosphate development (25 mV to +250 mV)			Polyphosphate breakdown / Biological phosphorus release (-25 mV to -250 mV)													
					Complete oxidation of ammonia at +500 mV		Nitrification (+100 mV to +350 mV)				Denitrification (-50 mV to +50 mV)					Methane formation (-200 mV to -400 mV)								
	Degradation of recalcitrant, emerging compounds (+500 mV to +800 mV)					Reduction of iron (+180 mV to +400 mV)																		
	Oxidation of pesticides, pharmaceuticals, antibiotics, petrochemicals (+400 mV to +700 mV)					Elimination of T&O from NOM		Aerobic biological nutrient removal (+50 mV to +200 mV)		Anoxic biological nutrient removal -just nitrates, little or no oxygen (+50 mV to -200 mV)			Anaerobic biological nutrient removal -no nitrate and no oxygen- (< -300 mV)											
			Breakdown of Chlorinated Disinfection Byproducts (> +350 mV)					Reduction of sulfate (+100 mV to 200 mV)				Sulfide (H ₂ S) formation (-50 mV to -250 mV)												
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